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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,669	02/01/2002	Barry Keith Hanover	33-XZ-6096	3087

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MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER

IMAM, ALI M

ART UNIT PAPER NUMBER

3737

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,669	HANOVER, BARRY KEITH	
	Examiner	Art Unit	
	Ali Imam	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/22/4 (Amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 3/22/4, all necessary changes to the claims have been entered.

Response to Arguments

2. Applicant's arguments filed 3/22/4 have been fully considered but they are not persuasive. Applicant's core argument is that Neither Mattson nor Fox teaches the step or structure for receiving a voice command identifying a function associated with one of a diagnostic and interventional procedure. Examiner respectfully disagrees.

In regard to the Mattson reference, the examiner contends that Mattson discloses a system and method comprising of a volume imaging apparatus for performing diagnostic procedures wherein the user inputs voice command using a microphone (10) to display the images. Examiner further contends that displaying images is one of diagnostic procedure since without looking at the images the diagnostic procedure cannot be completed.

In regard to the Fox reference, the examiner contends that the voice recognition unit of the treatment planner inherently performs the interventional procedure of the claimed invention. Fox's system and method allows a physician administering the interventional procedure to provide voice commands to the treatment planner in order to control operation of the treatment planner which suggests that the voice recognition unit identifies a function associated with the interventional procedure.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 12, 13, 17, 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Mattson et al. U.S. Patent No. 5,303,148.

Regarding claims 1-9, 17, 30, Mattson discloses a system and method comprising of a volume imaging apparatus for performing diagnostic procedures. A three-dimensional volume of a patient is stored in the image memory of a volume imaging apparatus. During surgery, a physician speaks commands that are received by a microphone (10). The apparatus responds to preselected electronic commands to display the volumes. A speech processor synthesizes a user's speech pattern (audio signals) and derives corresponding text (word signals). A command interpreter (14) receives the text and determines corresponding commands to feed to a system manager which controls the volume image accordingly. The command interpreter translates the text or command words as processed by the speech processor into the electronic control signals that have been produced by an operator keyboard or the like. In response to the verbal commands, one or more images is called up from the volume imager for display (column 2, lines 12-38) and (Figures 2 and 3).

Regarding claims 12, 13, 31, and 32, Mattson discloses wherein the invention relates to the art of medical diagnostics. It is applicable in conjunction with the display and processing of non-invasive image data, such as MRI, CT, and analogous images. Other imaging techniques,

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such as spiral CT scanning, PET scanning, and the like, may also be utilized to generate three-dimensional information. (column 1, lines 14-26).

5. Claims 21, 22, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Fox et al. U.S. Patent No. 6,273,858. Regarding claims 21, 22, and 26, Fox discloses a voice recognition unit of the treatment planner which allows the physician administering the treatment to provide verbal commands to the treatment planner in order to control operation of the treatment planner. The voice recognition unit uses a command and control engine for converting speech to text. One engine commercially available is the Microsoft Speech Engine. This engine can be used to incorporate voice commands for controlling software operations (column 11, lines 22-33). The dose prescription may be supplied to the treatment planner through the use of a microphone (46) (column 8, Lines 9-22). Furthermore, Fox discloses wherein the treatment volume is viewed using an external device such as fluoroscopy, diagnostic x-rays, CT, or MRI scans (column 9, Lines 35- 56).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10, 11, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattson as applied to claims 8 and 30 above, and further in view of Douglas U.S. Patent No. 5,335,313.

Regarding claims 10, 11, 15, 16, and 18-20, Mattson discloses a system and method comprising of a volume imaging apparatus for performing diagnostic procedures. A three-dimensional volume of a patient is stored in the image memory of a volume imaging apparatus. During surgery, a physician speaks commands that are received by a microphone (10). The apparatus responds to preselected electronic commands to display the volumes. A speech processor synthesizes a user's speech pattern (audio signals) and derives corresponding text (word signals). A command interpreter (14) receives the text and determines corresponding commands to feed to a system manager which controls the volume image accordingly. The command interpreter translates the text or command words as processed by the speech processor into the electronic control signals that have been produced by an operator keyboard or the like. In response to the verbal commands, one or more images is called up from the volume imager for display (column 2, lines 12-38) and (Figures 2 and 3).

Mattson does not disclose wherein the signal code is an infrared signal or a radio frequency signal code. Furthermore, Mattson does not disclose where the medical device and the microphone are remotely located from one another and include a remote control to transfer the signal code to the receiver provided at the medical device. Douglas discloses a voice-actuated environmental operator system of the kind which enables a user/patient to use simple voice commands to control a plurality of hospital room functions. The operator system uses a computer which is adapted to interface with the control unit (abstract).

Douglas further discloses wherein the voice control recognition environmental control units having speech synthesis capabilities are known in the art. The main control unit includes a microphone. Moreover, the control unit includes an infrared transmitter and uses known and

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commercially available infrared operable control modules for remote operation through voice command (column 1, Lines 50-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to disclose wherein the signal code is an infrared signal or a radio frequency signal code and where the medical device and the microphone are remotely located from one another and include a remote control to transfer the signal code to the receiver provided at the medical device, as per the teachings of Douglas into the teachings of Mattson, because Douglas discloses that while the computer/bed interface is disclosed as being accomplished through the use of direct hardwire connections, it is understood that other means for data communication may be used (column 16, Lines 36-47).

8. Claims 14 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattson as applied to claims 8 and 30 above, and further in view of Fox.

Regarding claims 14 and 33, Mattson discloses a system and method comprising of a volume imaging apparatus for performing diagnostic procedures. A three- dimensional volume of a patient is stored in the image memory of a volume imaging apparatus. During surgery, a physician speaks commands that are received by a microphone (10). The apparatus responds to preselected electronic commands to display the volumes. A speech processor synthesizes a user's speech pattern (audio signals) and derives corresponding text (word signals). A command interpreter (14) receives the text and determines corresponding commands to feed to a system manager which controls the volume image accordingly. The command interpreter translates the text or command words as processed by the speech processor into the electronic control signals that have been produced by an operator keyboard or the like. In response to the verbal

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commands, one or more images is called up from the volume imager for display (column 2, Lines 12-38) and (Figures 2 and 3). Mattson further discloses wherein the invention is applicable in conjunction with the display and processing of non-invasive image data, such as MRI, CT, and analogous images. Other imaging techniques, such as spiral CT scanning, PET scanning, and the like, may also be utilized to generate three-dimensional information. (column 1, lines 14-26).

Mattson does not disclose wherein the medical device is a fluoroscopic imaging device.

Fox discloses wherein the medical device is a fluoroscopic imaging device.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to disclose wherein the medical device is a fluoroscopic imaging device, as per the teachings of Fox into Mattson, because fluoroscopic imaging is a comparable imaging method to MRI, CT, PET, etc. Both Mattson and Fox disclose that any imaging technique analogous to MRI, CT, etc. can be used to generate three-dimensional information.

9. Claims 23-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox as applied to claim 21 above, and further in view of Douglas U.S. Patent No. 5,335,313.

Regarding claims 23-25 and 27-29, Fox discloses a voice recognition unit of the treatment planner which allows the physician administering the treatment to provide verbal commands to the treatment planner in order to control operation of the treatment planner. The voice recognition unit uses a command and control engine for converting speech to text. One engine commercially available is the Microsoft Speech Engine. This engine can be used to incorporate voice commands for controlling software operations (column 11, Lines 22-33). The dose prescription may be supplied to the treatment planner through the use of a microphone (46) (column 8, lines 9-22). Furthermore, Fox discloses wherein the treatment volume is viewed using

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an external device Such as fluoroscopy, diagnostic X-rays, CT, or MRI scans (column 9, Lines 35- 56).

Fox does not disclose wherein the signal code is an infrared signal or a radio frequency signal code. Furthermore, Fox does not disclose where the medical device and the microphone are remotely located from one another and include a remote control to transfer the signal code to the receiver provided at the medical device.

Douglas discloses a voice-actuated environmental operator system of the kind which enables a user/patient to use simple voice commands to control a plurality of hospital room functions. The operator system uses a computer which is adapted to interface with the control unit (abstract). Douglas further discloses wherein the voice control recognition environmental control units having speech synthesis capabilities are known in the art. The main control unit includes a microphone. Moreover, the control unit includes an infrared transmitter and uses known and commercially available infrared operable control modules for remote operation through voice command (column 1, lines 50-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to disclose wherein the signal code is an infrared signal or a radio frequency signal code and where the medical device and the microphone are remotely located from one another and include a remote control to transfer the signal code to the receiver provided at the medical device, as per the teachings of Douglas into the teachings of Fox, because Douglas discloses that while the computer/bed interface is disclosed as being accomplished through the use of direct hardwire connections, it is understood that other means for data communication may be used (column 16, Lines 36-47).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Imam whose telephone number is 703-305-0028. The examiner can normally be reached on Mon. - Th., 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703-308-5181. The fax phone-number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ali Imam
Primary Examiner
Art Unit 3737

AMI
9/20/4